

28. (Twice Amended) A process for detecting a mutation in a target nucleic acid sequence in a target nucleic acid molecule, in a sample, comprising:

a) hybridizing a primer to nucleic acid molecules in the sample, thereby producing a hybridized primer and a molecule from the sample, wherein:

the nucleic acid molecules from the sample are optionally immobilized and the primer is complementary to a sequence in the target nucleic acid sequence that is adjacent to the region suspected of containing a mutation sequence;

b) contacting the hybridized primer with a composition comprising mass-matched deoxyribonucleoside triphosphates and a chain terminating nucleotide selected from a dideoxyribonucleoside triphosphate or a 3'-deoxynucleoside triphosphate and optionally one or more deoxyribonucleoside triphosphates, such that the hybridized primer is extended until a chain terminating nucleotide is incorporated, thereby producing an extended primer; and

c) determining the mass of the extended primer, thereby determining whether a mutation is present in the target nucleic acid sequence.

REMARKS

A check for the requisite fee for a three-month extension of time accompanies this response. Any fees that may be due in connection with this paper or this application may be charged to Deposit Account No. 50-1213. If a Petition for extension of time is needed, this paper is to be considered such Petition.

Claims 1-8, 10-20, and 25-45 are pending in this application. Claim 5 is amended to correct minor grammatical and typographical errors. Claim 28 is amended to add the inadvertently omitted noun "acid" for grammatical clarity. The amendment finds basis in claim 28, which recites the phrase "nucleic acid."